KNOWLEDGE OVERVIEW GRID

	Subject: Computing			Year Group: 3		
	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
	Hour of Code Course C Part 1	**Theory – Computer Networks**	**Microsoft Word**	**Hour of Code C Part 2**	**Microsoft PowerPoint**	**Photo Editing**
NC Objectives Covered **(Taken directly from the National Curriculum)**	Design, write and debug programs that accomplish specific goals. Use sequence, selection, work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration	Use search technologies effectively Appreciate how results are selected and ranked, Be discerning in evaluating digital content Select, use and combine a variety of software to design and create a range of programs, systems and content. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Design, write and debug programs that accomplish specific goals. Use sequence, selection, work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Use search technologies effectively Be discerning in evaluating digital content Select, use and combine a variety of software to design and create a range of programs, systems and content. Select, use and combine a variety of software to design and create a range of programs, systems and content. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Be discerning in evaluating digital content Select, use and combine a variety of software to design and create a range of programs, systems and content. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.
Digital Literacy Strand	Privacy and Security AUP Password setting	Online Relationships Online Bullying	Health, Well Being and lifestyle	Self-Image and Identity	Managing Online Information. Copywright and Ownership	Online reputation
Previous Knowledge **-What have children learnt previously that will support this next step?**	Hour of Code Course B Using block coding Sequencing Some basic introduction to loops Debugging Effective partner work (driver/navigator)	Computer systems and networks around us (Year 2)	KS1: Previous use of Microsoft word. In Year 2 they are able to: create and edit content in Microsoft word. They can log on and save their work.	Hour of Code Course B First part of programme completed in A1. This unit builds on loops and gives more flexibility to generate their own content.	Previous Office skills MS Word in Year 1 and 2 to generate and edit content. This will have been consolidated in Spring 1 with MS word.	They will already have used MS Paint in KS1 so can use the basic tools such as paint brush, using lines to create content. They have not yet edited content.

Misconceptions **-What are the common misconceptions in knowledge for this unit?**	Using incorrect blocks for selection. Using too many blocks – not as efficient as it should be. Failing to use -Step to break down into smaller steps. Creating passwords which are too difficult to remember. Sharing passwords with friends.	Not understanding how devices are linked.	Post covid – some skills gaps including saving documents. Recaps built in to address this. Not understanding that all families have different rules and that it works best when there is a set of agreed family boundaries.	Using incorrect blocks for selection. Using too many blocks – not as efficient as it should be. Failing to use -Step to break down into smaller steps. Children often unaware of the process of image manipulation we see in media and impact on their mental health	Not knowing how to save their work and retrieve it for the next lesson. Some prior knowledge of copywrite but often unaware how to credit the original author/artist.	NA – unit first taught 2022-2023 The permanent nature of anything searched, written, posted online.

Learning Sequence -Detail the learning sequence using key questions in an ordered sequence. -The questions should have a sequential build up to answer the overall learning challenge. Red= Declarative knowledge ('knowing that') Blue= procedural knowledge ('knowing how')	1. Acceptable Use Policy Lesson. 2. Recap features of good programming – e.g good partner work (driver navigator), what good programming looks like, what to do if I'm stuck. Driver navigator video Can I sequence with Angry birds? 3. Can I debug in a maze? 4. Can I collect treasure with Laurel? 5. Can I create art with code? 6. Can I create loops with Rey? E Safety Warm Up content: I can describe simple strategies for password setting I can give reasons why I should only share with people I can trust I can describe how device can collect and share information with others.	1. How does a digital device work? 2. What parts make up a digital device? 3. How do digital devices help us? 4. How am I connected? 5. How are computers connected? 6. What does our school network look like? E Safety Warm Up content: I can describe why someone online may be different to someone offline. I can explain how people with similar interests can get together online I can explain difference between liking someone online and trusting them online I can explain how feelings can be hurt by online content I understand importance of consent before sharing information online. I can describe appropriate ways to behave online. I can give examples of how bullying could appear online and how to get support.	1. What is the purpose of a Microsoft Word document and how do I open, name and save my word document. 2. Can I add pictures to my document 3. Can I change the font on my document? 4. Can I edit my document to ensure it is effective? (font size, colour) 5. Can I present my poster to the class? E Safety Warm Up content: I can explain why too much tech time can have a negative impact on mood, sleep, relationships etc. I can explain why some online activities have age restrictions, why they are important and who to ask for help if I'm out under pressure to watch or do something online that I don't want to.	1. Recap features of good programming – e.g good partner work (driver navigator), what good programming looks like, what to do if I'm stuck. Driver navigator video Can I harvest crops with loops? 2, Can I create a mini sticker projects? 3.Can I build a flappy game? 4.Can I create a mini chase game? 5.Can I learn about binary bracelets? 6.Can I create end of unit assessment? E Safety Warm Up content: I can explain what is meant by identity. I can explain why people represent themselves in different ways online. I can explain why that might change their identity e.g through gaming and social media and why.	1. What is the purpose of a PowerPoint presentation and how do I open, name and save my PowerPoint presentation? 2. Can I add new slides and written content 3. Can I add pictures to my PPT 4. Can I change the font on my PPT 5. Can I edit my PPT to ensure it is effective? (font size, colour) 6. Can I present my PPT? E Safety Warm Up content: I can show how to use key phrases in search engines to get accurate information online. I can explain what autocomplete is I can explain how the internet can be used to buy and sell things. I can explain the difference between a fact and a belief. I can explain that not all opinions are facts. I can describe how to get help if I see content that is worrying online.	Week 1: What is photo editing? Tinkering. Finding paint and opening photo – What do I already know. Week 2: Can I change digital images? Week 3: Can I recolour photos? Week 4: Can I retouch photos? Week 5: Can I create a 'fake' image? Week 6: Mini - Asessement. Can I showcase the skills I have learnt to edit a photo? E Safety Warm Up content: Ican explain how to search for information about others online. I can explain why I need to be careful before sharing anything personal. I can explain who someone can ask if they are not sure about putting something online.

					I can explain why copying people's work online isn't fair.	
Curriculum End Points **-What will children know and be able to do by the end of the unit?** **-What will the children produce to demonstrate this knowledge?**	Course C partially completed Each lesson allows for completion of Hour of Code task to meet procedural knowledge. Hungry Squirrel/Alien task is end of unit task and is open ended task which practises skills) Acceptable Use Policy Signed	Children have an understanding of computer networks.	Children will create a Word document based on a Change One Thing competition. They will be able to: -Use knowledge/skills from previous years. -Use new knowledge/skills: • Adding written content • Adding pictures • Changing Font • Evaluating their work.	Course C Lessons -16 completed. Each lesson allows for completion of Hour of Code task to meet procedural knowledge. Hungry Squirrel/Alien task is end of unit task and is open ended task which practises skills)	Children will create a PowerPoint based on a curriculum topic. They will be able to: -Use knowledge/skills from previous years. -Use new knowledge/skills: • New use of PPT • Adding written content • Adding pictures • Changing Font • Editing PPT • Evaluate their work.	Separate photos tasks as part of each lesson. Final lesson, free option to create their own art. Final assessment piece saved under pupil area and then on SharePoint.

Knowledge Sentences **-Using the end points, what are the key statements children need to remember by the end of the unit?** **(I know that…)** **(To share with children when it is taught during the unit)**		1. I know how to keep school equipment safe and understand the school acceptable use policy. 2. I know good programming involves: • how to work well in computing with a partner using the driver/navigator metaphor. • debug my programme. • using the repeat block. • using loops	I know that a digital device is a piece of physical equipment that uses digital data. Digital devices can create, generate, send, share, communicate, receive, store, display, or process information. A typical digital computer system has four basic functional elements: (1) input-output equipment, (2) main memory, (3) control unit, and (4) arithmetic-logic unit. Computer networks connect computers, using cables, fiber optics, or wireless signals. These connections allow devices in a network to communicate and share information and resources.	I know that Microsoft Word is a piece of software to create text documents. I can use Microsoft word to: 1. Add pictures to a document. 2. Change the font on a document 3. Edit a document using font size and colour. To present my work, I know that I need to: -speak clearly and with expression. -add further information where necessary (rather than reading off the slides). -Answer questions after the presentation.	I know that the features of good programming include: 1) thinking about the most efficient way to achieve an outcome. 2) be able to test that your code works effectively. I know that binary is composed of two things. In computing it is composed of two digits: 1 and 0. To make my programme work I must: 1. Apply loops 2. Place and move stickers in my code. 3. Apply loops to create my own game.	I know that Microsoft Powerpoint is a piece of software used to create and present information. On Powerpoint I can: • Open and Save • Add new slides and written content. • Add pictures • Change the font, size and colour • Edit and improve • Present it	I know that photo editing is the process of changing and altering a photo. Photo editing includes: 1. Changing digital images. 2. Recolour photos 3. Creating a fake image. 4. Create my own image using (crop, rotate, recolour, clone etc)
Key Vocabulary **(To share with children and add to working walls/knowledge mats)**		Event blocks Block coding Loops Debug Algorithim	Network, switch, input, output, server	Save, Save As, Microsoft Word, Image, text box, font, bold, italic, underline.	Event blocks Block coding Loops Debug Algorithim	Save, Save As, Microsoft Word, Image, text box, font, bold, italic, underline.	Crop, filter, 3D effects, light.
What does this look like at Bramhope?	**Enrichment Activities (trips, residentials, speakers, SMSC)**	Digital Leader assembly	Digital Leader assembly Parent Workshop linked to Parents evening.	Change One Thing Competition Digital Leader Parent Presentation ‘Parenting in a digital world’. (SharePoint/Annual Events)	Digital Leader assembly	Digital Leader assembly	Whole School Online Survey
	Physical Resources (artefacts)	Link to AUP lessons on Sharepoint Link to Hour of Code Kara and Smart Crew - email links Chapter 1 Kara and Smart Crew - keeping safe online LKS2 Autumn 1 Privacy and Security	Teach Computing Connecting Computers Lessons Plans Kara and Smart Crew Online Bullying Chapter 3 KS2 Summer 1 Online Bullying Kara and Smart Crew - be careful meeting up Chapter 5	Computing Word LKS2 Spring 1 Wellbeing	Link to Hour of Code	Kara and Smart Crew Online Information Chapter 2 LKS2 Autumn 2 Managing Online Information	This is the planning we did last year. Summer 2 Photo Editing Teach computing link Teach computing link to Photo Editing4 Common Sense Media digital footprint video

							.
	Cross Curricular learning (Include opportunities for writing and quality texts)	NA		Word document linked to Change One Thing competition	NA	PowerPoint linked to history/science/geography topic.	NA
	Local Learning including outdoor learning	NA	NA	NA	NA	NA	NA
	Opportunities for cultural Diversity	NA					